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A new *Corynesporella* species and two first records from China

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Abstract — A new species, *Corynesporella obclavata,* is described and illustrated from dead branches of *Pistacia chinensis* collected from tropical forests in Yunnan Province, China. A synopsis of *Corynesporella* species is provided. *Stephembruneria elegans* and *Diplococcium pulneyense* are recorded for the first time from China.

Key words — anamorphic fungi, taxonomy

Introduction

Numerous fungi on wood have been discovered in tropical and subtropical forests during recent research on the fungus flora of South China (Dai et al. 2009, Dai & Li 2010, Ma et al. 2010, 2011). In our continuing study of conidial fungi on dead wood, a hitherto undescribed species of *Corynesporella* and two new records were found. These three species are described, illustrated, and compared with similar species. The specimens are deposited in HSAUP (Herbarium of the Department of Plant Pathology, Shandong Agricultural University) and HMAS (Mycological Herbarium, Institute of Microbiology, Chinese Academy of Sciences).

Taxonomy

Corynesporella obclavata L.G. Ma & X.G. Zhang, **sp. nov.** Fig. 1

MycoBank MB 563273

Conidiophora macronematica, ramosa, 230–635 µm longa, ad apicem 3.5–6.5 µm lata, ad basem 8.5–15 µm lata. Cellulae conidiogenae monotreticae, in conidiophoris incorporatae, terminales, 7.5–16 × 3.5–7.5 µm. Conidia solitaria, acrogena, obclavata, brunneae, cellula apicali pallide brunnea, laevibus, 33–55 × 6.5–11 µm, 5–7-pseudoseptata.

Type: China, Yunnan Province: the Forbidden Forest of Banna, on dead branches of *Pistacia chinensis* Bunge (*Anacardiaceae*), 17 Oct. 2008, L.G. Ma (**holotype**, HSAUP H0033; **isotype**, HMAS 146152).

Etymology: *obclavata*, in reference to the conidial shape.

Table 1. Comparison of *Corynesporella* species.

Species	Conidiophores		Conidiogenous cells	Conidia				
	size (µm)	branching	size (µm)	size (µm)	catenate	color	septation	shape
C. bhowaliensis	920–1120 × 10–14	yes	32–64 × <8	70–192 × 8–10	no	subhyaline to pale brown	15–32	vermiform, cylindrical or subcylindrical
C. helminthosporioides	95–900 × 8–20	yes	9–18 × 6.5–10	50–75 × 8.8–12.8	no	subhyaline	9–13	obclavate, occasionally rostrate
C. obclavata	230–635 × 8.5–15	yes	7.5–16 × 3.5–7.5	33–55 × 6.5–11.0	no	brown	5–7	obclavate
C. pinarensis	<350 × 7–14	no	10.5–20 × 4–5	25–75 × 3.5–7	yes	brown to olive brown	(1–)3(–5)	obclavate
C. simpliphora	150–600 × 6.5–8	no	–	18–62 × 6.5–10	yes	pale olive	1–7	obclavate
C. superioramifera	20–160 × 2–5	yes	8–22 × 4–4.5	5–90 × 2.5–9	yes	moderately black	0–5	cylindrical
C. urticae	786–1048 × 13–19	yes	–	98–270 × 7–12	yes	subhyaline to pale brown	5–29	subcylindrical or obclavate

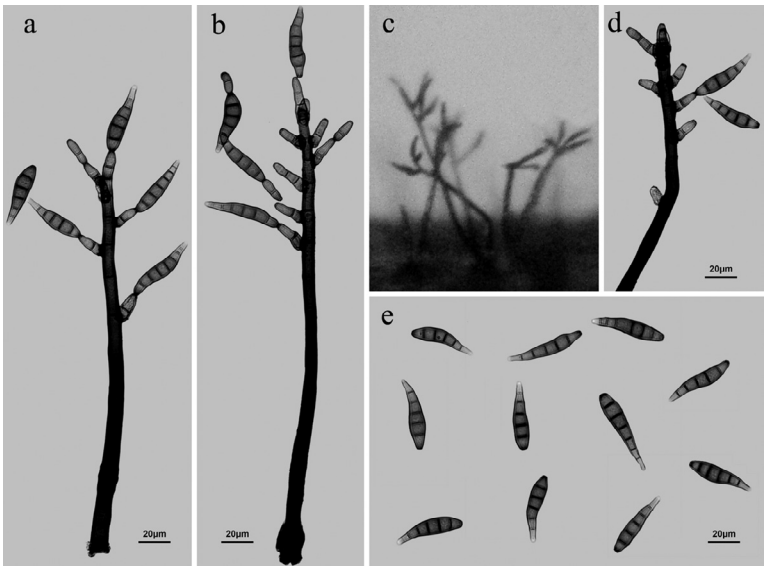

Fig. 1. *Corynesporella obclavata*. a, b. Branched conidiophores, conidiogenous cells and conidia. c. Conidiophores arising from wood. d. Conidiogenous cells. e. Conidia.

Colonies on natural substrate effuse, brown to dark brown. Mycelium partly immersed, partly superficial, composed of branched, septate, pale brown, smooth hyphae, 2–4 μm wide. Conidiophores macronematous, mononematous, erect, branched, straight or flexuous, cylindrical, brown, thick-walled, multiseptate, smooth, 230–635 μm long, 3.5–6.5 μm wide at the apex, 8.5–15 μm wide at the base. Conidiogenous cells monotretic, integrated, terminal, cylindrical, smooth, brown, thick-walled, 7.5–16 × 3.5–7.5 μm. Conidia solitary, acrogenous, obclavate, brown, apical cells pale brown, smooth, thick-walled, 5–7-distoseptate, 33–55 × 6.5–11 μm.

All seven *Corynesporella* species are presented in Table 1. In conidial shape, *C. obclavata* is most similar to *C. helminthosporioides* (Holubová-Jechová 1987), which can be easily separated by its larger (50–75 × 8.8–12.8 μm) subhyaline conidia with more septa (9–13-distosepta).

Stephembruneria elegans R.F. Castañeda, Fungi Cubenses III: 14, 1988. Fig. 2

Colonies on natural substrate effuse, brown. Mycelium partly superficial, partly immersed, composed of branched, septate, smooth, pale brown to brown hyphae, 1–2 μm wide. Conidiophores macronematous mononematous, unbranched, erect, straight to slightly flexuous, smooth, dark brown, cylindrical, thick-walled, paler and narrower at the apex, multiseptate, 170–290 μm long, 5–11.5 μm wide. Conidiogenous cells monophialidic, cylindrical, integrated,

terminal, percurrent, smooth, pale brown to subhyaline, with a minute collar at the apex, 2.5–3.3 um wide. Conidia solitary, phialidic, navicular to fusiform, rounded at the apex, with a narrow hilum at the base, smooth, 6–7-euseptate, simple, end cells subhyaline, central cells dark brown, 26.5–33.5 µm long, 10–11.5 µm wide.

Specimen examined: **CHINA**, **Hainan Province**: the National Natural Reserve of Bawangling, on dead branches of *Ficus benjamina* L. (*Moraceae*), 23 Nov. 2008, L.G. Ma (HSAUP H0514, HMAS 146149).

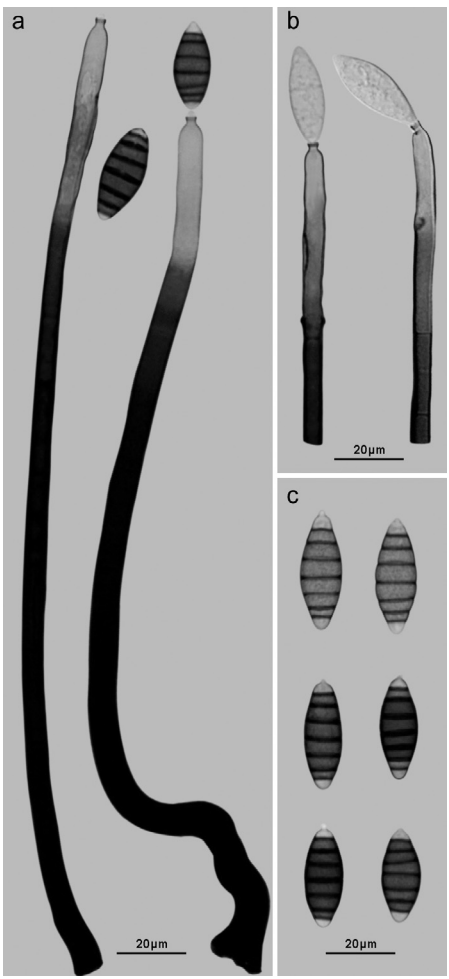

Fig. 2. *Stephembruneria elegans*. a. Conidiophores, conidiogenous cells and conidia. b. Conidiogenous cells with immature conidia. c. Conidia.

The genus *Stephembruneria* was erected by Castañeda Ruíz (1988) to accommodate a single species, *S. elegans*. Currently *Stephembruneria* remains monotypic and is characterized by macronematous, mononematous conidiophores, monophialidic, terminal, integrated, conidiogenous cells that narrow to a slightly cupulate collarette at the apex, and solitary, euseptate, navicular to fusiform, versicolored conidia. The type material differs from our material by its larger conidia (30–43 × 10–13 μm) and longer conidiophores (250–350 μm). This is the first record from China.

Fig. 3. *Diplococcium pulneyense*.
a. Branched conidiophores, conidiogenous cells and conidia. b. Conidia.

Diplococcium pulneyense Subram. & Sekar, Kavaka 15: 91, 1989. Fig. 3

Colonies on natural substrate effuse, dark brown, hairy. Mycelium partly superficial, partly immersed, composed of branched, septate, pale brown to brown, smooth hyphae, 2–3 μm wide. Conidiophores macronematous, mononematous, branched, branches often short, erect, cylindrical, straight

or flexuous, smooth, brown, thick-walled, 6–12-septate, 110–265 μm long, 8.5–10 μm wide at the base, 5–7.5 μm wide at the apex. Conidiogenous cells integrated, polytretic, terminal and intercalary, cylindrical, brown, smooth, thick-walled. Conidia in acropleurogenous chains, up to 7 in number, ellipsoidal, subcylindrical, 1–(2)-euseptate, rounded at both ends, concolored, brown, smooth, thick-walled, 10–18.5 × 6–7.5 μm.

Specimen examined: **China**, **Guangdong Province**: the National Forest Park of Shimen, on dead branches of *Bauhinia blakeana* Dunn (*Caesalpiniaceae*), 20 Oct. 2010, L.G. Ma (HSAUP H1787, HMAS 146150).

Diplococcium pulneyense is most similar to *D. spicatum* in conidial shape and septation (Grove 1885), but *D. spicatum* can be distinguished by its smaller conidia (6–9 × 3–4 μm). The type material differs from the Chinese specimen by its longer conidia (12–30 μm) and narrower conidiophores (3–5.5 μm). This is a new record from China.

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